

IMPROVED PARTICLE INTERACTIONS IN A FLUID FLOW
ABSTRACT OF THE DISCLOSURE

Interaction between two different species of particle(s) in a fluid stream is promoted by generating turbulent eddies in a fluid stream. The turbulent eddies are designed to be of such size and/or intensity that the different sized particle(s) are entrained into the eddies to significantly different extents and forced to follow different trajectories, increasing the likelihood of collisions and interactions. Optimum collision rates will occur for a system which maintains a Stokes Number much less than 1 for one sized particle, and or order 1 or greater for the other sized particle. The invention has particular application in air pollution control, whereby agglomeration of fine particles into larger particles is promoted, subsequent to their removal.